



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of : **Confirmation No. 2488**

Kazunori KATAOKA et al. : Docket No. 2004-1545A

Serial No. 10/509,576 : Group Art Unit 1645

Filed September 29, 2004 :

BIOSENSOR CHIP SURFACE
CARRYING POLYETHYLENE
GLYCOLATED NANOPARTICLES :

THE COMMISSIONER IS AUTHORIZED
TO CHARGE ANY DEFICIENCY IN THE
FEE FOR THIS PAPER TO DEPOSIT
ACCOUNT NO. 23-0975.

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Pursuant to the provisions of 37 CFR 1.56, 1.97 and 1.98, Applicants request consideration of the references listed on attached form PTO-1449 and any additional information identified below in paragraph 3. A legible copy of each reference listed on the Form PTO-1449 is enclosed, except a copy is not provided for:

- ☒ each U.S. Patent and U.S. Patent application publication;
- ☐ each reference previously cited in the international application PCT/_____; and/or
- ☐ each reference previously cited in prior parent application Serial No.

1a. ☒ This Information Disclosure Statement is submitted:

within three months of the filing date (or of entry into the National Stage) of the above-entitled application, **or**

before the mailing of a first Office Action on the merits or the mailing of a first Office Action after the filing of an RCE,

and thus no certification and/or fee is required.

1b. ☐ This Information Disclosure Statement is submitted

after the events of above paragraph 1a and prior to the mailing date of a final Office Action or a Notice of Allowance or an action which otherwise closes prosecution in the application, and thus:

(1) ☐ the certification of paragraph 2 below is provided, **or**

(2) ☐ the fee of \$180.00 specified in 37 CFR 1.17(p) is enclosed.

1c. ☐ This Information Disclosure Statement is submitted:

after the mailing date of a final Office Action or Notice of Allowance or action which otherwise closes prosecution in the application, and prior to payment of the issue fee, and thus:

the certification of paragraph 2 below is provided, and

the fee of \$180.00 specified in 37 CFR 1.17(p) is enclosed.

2. It is hereby certified

- a. ☐ that each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of the Statement, or
- b. ☐ that no item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application and, to the knowledge of the person signing the certification after making reasonable inquiry, was known to any individual designated in §1.56(c) more than three months prior to the filing of the Statement.

3. ☐ Consideration of the following list of additional information (including any copending or abandoned U.S. application, prior uses and/or sales, etc.) is requested.
4. For each non-English language reference listed on the attached form PTO-1449, reference is made to:
- a. ☐ a full or partial English language translation submitted herewith,
 - b. ☐ a foreign patent office search report (in the English language) submitted herewith,
 - c. ☒ the concise explanation contained in the specification of the present application at pages 1-4,
 - d. ☒ the concise explanation set forth in the attached English language abstract,
 - e. ☐ the concise explanation set forth below or on a separate sheet attached to the reference:
5. ☐ A foreign patent office search report citing one or more of the references is enclosed.
6. ☐ Statement Under 37 CFR 1.704(d)

Each item of information contained in the Information Disclosure Statement was first cited in any communication from a foreign Patent Office in a counterpart application, and this communication was not received by any individual designated in §1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.

7. ☒ Comments:


We enclose herewith copies of the references cited in the International Search Report. These references were previously cited (references AJ-AP) on the PTO-1449 form attached to the Information Disclosure Statement filed September 29, 2004.

WO '301, cited on the attached PTO-1449 form, corresponds to US 2003/0171506, also cited herein. JP '903, cited herein, corresponds to US 2004/0038506, cited herein. WO '200, cited on the PTO-1449 form attached to the Information Disclosure Statement filed September 29, 2004, also corresponds to US 2004/0038506.

JP '097, cited on the PTO-1449 form attached to the Information Disclosure Statement filed September 29, 2004, is related to US '275, cited herein. WO '690, cited on the PTO-1449 form attached to the Information Disclosure Statement filed September 29, 2004, corresponds to the English translation of originally filed PCT application PCT/JP02/08619, cited herein.

Respectfully submitted,

Kazunori KATAOKA et al.

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March 30, 2005

INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT
(Use several sheets if necessary)

Date Submitted to PTO: March 30, 2005

ATTY DOCKET NO.
2004-1545ASERIAL NO.
10/509,576APPLICANT
Kazunori KATAOKA et al.FILING DATE
September 29, 2004GROUP
1645

U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA	5,242,828	9/1993	Bergström et al.			
	AB	2003/0171506	9/2003	Kataoka et al.			
	AC	2004/0038506	2/2004	Kataoka et al.			
	AD	6,833,275	12/2004	Nichtl			
	AE	2002/0052009	5/2002	Hornauer et al.			

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO	
	AF	01/86301	11/2001	WO				
	AG	2002-267669	9/2002	Japan				
	AH	2000-055920	2/2000	Japan				
	AI	2001-200050	7/2001	Japan				
	AJ	2002-80903	3/2002	Japan				
	AK							
	AL							

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

	AM	A. Szabo et al., "Surface plasmon resonance and its use in biomolecular interaction analysis (BIA)", Current Opinion in Structural Biology, 5, pages 699-705, 1995.
	AN	C. Roberts et al., "Using Mixed Self-Assembled Monolayers Presenting RGD and (EG) ₃ OH Groups To Characterize Long-Term Attachment of Bovine Capillary Endothelial Cells to Surfaces", J. Am. Chem. Soc., 120, pages 6548-6555, 1998.
	AO	L.A. Lyon et al., "Colloidal Au-Enhanced Surface Plasmon Resonance Immunosensing", Anal. Chem., 70, pages 5177-5183, 1998.
	AP	L. He et al., "Colloidal Au-Enhanced Surface Plasmon Resonance for Ultrasensitive Detection of DNA Hybridization", J. Am. Chem. Soc., 122, pages 9071-9077, 2000.

EXAMINER

DATE CONSIDERED

INFORMATION DISCLOSURE STATEMENT

FORM PTO 1449 (modified)

U.S. DEPARTMENT OF COMMERCE
PATENT AND TRADEMARK OFFICELIST OF REFERENCES CITED BY APPLICANT
(Use several sheets if necessary)

Date Submitted to PTO: March 30, 2005

PRIORITY DOCKET NO.
0004-1545ASERIAL NO.
10/509,576APPLICANT
Kazunori KATAOKA et al.FILING DATE
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U.S. PATENT DOCUMENTS

*EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
	AA						
	AB						
	AC						

FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES NO
	AD						
	AE						
	AF						
	AG						

OTHER DOCUMENT(S) (Including Author, Title, Date, Pertinent Pages, Etc.)

	AH	English translation of originally filed PCT application (PCT/JP02/08619).
	AI	E. Hutter et al., "Surface Plasmon Resonance Studies of Gold and Silver Nanoparticles Linked to Gold and Silver Substrates by 2-Aminoethanethiol and 1,6-Hexanedithiol", J. Phys. Chem. B, 105, pages 11159-11168, 2001.
	AJ	N. Nath et al., "A Colorimetric Gold Nanoparticle Sensor to Interrogate Biomolecular Interactions in Real Time on a Surface", Anal. Chem., 74, pages 504-509, 2002.
	AK	W. P. Wuelfing et al., "Nanometer Gold Clusters Protected by Surface-Bound Monolayers of Thiolated Poly(ethylene glycol) Polymer Electrolyte", J. Am. Chem. Soc., 120, pages 12696-12697, 1998.
	AL	
	AM	

EXAMINER

DATE CONSIDERED

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of form with next communication to applicant.